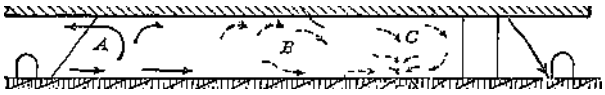
All of these defects are due to a disregard of the principles which govern the subdivision of currents of gases when heating or cooling.

This may be clearly shown by the consideration of a simple case (Fig. 91), where *A* is the portion of the tunnel chamber in which the air is preheated, *B* the portion of the chamber in which the fuel is introduced and where the ware is burned, *C* the portion of the chamber in which the ware is preheated by the waste heat, *E* the flue connection to the chimney and D the portion in which the ware is being set.

The sections may be considered in order, starting with section *B* of the tunnel, where combustion takes place and the ware is burned. The gas circulation which is to be established in this section must be such that the hot gases flow to all parts of the tunnel chamber being heated. The hot gases,



however, imme-